

CLAIMS

What is claimed is:

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1. A system for integrating and coordinating a plurality of media presentation displays comprising:
 - at least one media source having a media sequence;
 - for each media source, a presentation controller responsive to the media source, and connected to receive the media sequence from the media source, the presentation controller being operable for wireless communication;
 - a presentation server operable for wireless communication with each presentation controller such that the presentation server receives the media sequences of each media source; and
 - at least one media transmitter connected to the presentation server, each of the projectors responsive to the presentation server and operable to display the media sequence of the media sources.
 2. The system of claim 1 wherein the presentation controller further comprises a display sequencer operable to receive each of the media sequences from the media sources.
 3. The system of claim 2 wherein the presentation server further comprises an arbitrator responsive to each presentation controller and operable to selectively display each of the media sequences from the media sources.
 4. The system of claim 3 further comprising an operator controller in communication with the display sequencer and the arbitrator and operable to select media sequences and portions of media sequences for display through each projector.

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5. The system of claim 1 wherein the display sequencer is operable to selectively transmit changed portions of a displayed media sequence.
6. The system of claim 1 wherein the presentation server is operable to receive only those portions of a displayed media sequence which have changed.
- 5 7. The system of claim 1 wherein the at least one media transmitter comprises a plurality of projectors.
8. The system of claim 7 wherein the presentation server further comprises a projector controller operable to augment a displayed media sequence from each of the projectors.
- 10 9. The system of claim 1 further comprising a camera operable to capture signals from the displayed media sequence, the camera being in communication with the presentation server.
10. The system of claim 9 wherein the media source is responsive to the presentation server, the presentation server directing the media source in response to the captured camera signals.
- 15 11. The system of claim 1 wherein the media source is connected to the presentation controller via a video output port operable to transmit the media sequence.
12. The system of claim 1 wherein the media source is connected to the presentation controller via a mouse input port operable to receive signals from the presentation server.
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13. The system of claim 1 wherein the media source is a handheld personal computing device.
14. A method of transmitting presentation data from a media source to a media presenter comprising:
- 5 establishing a wireless link between the media source and the media presenter, the media source having a media sequence comprising frames; transmitting at least one frame from the media source to the media presenter;
- 10 rendering a displayed image by the media presenter on a common medium based on the transmitted frame; and selectively transmitting at least a portion of a subsequent frame in the media sequence from the media source to the media presenter when a measurable difference in images from one frame to another frame is detected in the media sequence.
15. The method of claim 14 wherein the media presenter is operable to change the displayed image according to a predetermined threshold of differences between the displayed image and image of the subsequent frame in the media sequence.
16. The method of claim 14 further comprising a plurality of media sources, wherein rendering further comprises selectively arbitrating among media sequences transmitted from each of the media sources.
- 20 17. The method of claim 14 further comprising capturing the displayed image from the common medium at the media presenter; and reading control parameters from the displayed image.

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18. The method of claim 17 wherein the control parameters are indicative of which of the media sources to display.
19. The method of claim 14 wherein the transmitting from the media source to the media presenter is performed according to a predetermined protocol.
- 5 20. The method of claim 19 wherein the predetermined protocol is IEEE 802.15.
21. The method of claim 14 further comprising arbitrating by the media presenter.
22. The method of claim 14 further comprising a plurality of media sources, and wherein the step of establishing includes providing a presentation server as the media presenter, the presentation server being in wireless communication with each of the media sources.
- 10 23. A method of displaying media data comprising:
- disposing a plurality of projectors proximate to a common display, the projectors receiving a signal from at least one video source;
- calibrating the brightness of a respective displayed image from each of the projectors such that an aggregated displayed image on the common display has a consistent brightness;
- 15 style="padding-left: 40px;">detecting the presence of an interfering object between at least one of the projectors and the common display, the interfering object appearing as an obscured portion in the respective displayed image from the at least one projector on the common display; and
- 20 style="padding-left: 40px;">recomputing the brightness from each of the projectors such that display intensity at the obscured portion is compensated for and maintained at a level consistent with brightness of the respective displayed image before the presence of the interfering object.

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24. The method of claim 23 wherein each of the projectors is in communication with a presentation server, the presentation server operable to transmit signals indicative of the displayed image to the projectors.
25. The method of claim 24 further comprising arbitrating the displayed image from among a plurality of video sources.
26. The method of claim 23 wherein the interfering object is a human operator.
27. The method of claim 23 wherein recomputing the brightness further comprises dimming the brightness of the obscured portion from the obscured projector.
28. The method of claim 23 further comprising computing the obscured portion at a predetermined granularity.
29. The method of claim 28 wherein the granularity is a subpixel granularity.
30. The method of claim 23 wherein computing the brightness further comprises recomputing the brightness according to a predetermined interval.
31. The method of claim 30 wherein the predetermined interval further comprises a realtime video rate.
32. The method of claim 23 further comprising recomputing the intensity of the obscured portion from each of the projectors such that the aggregated displayed image from all projectors has a consistently aligned appearance.
33. A method of displaying media on a common display comprising:
providing a plurality of projectors operable for multimedia display;

disposing each of the projectors at a selected location in proximity to the common display, each of the locations having a perspective to the common display;

receiving, at each of the plurality of projectors, a media sequence comprising at least one frame;

determining, based on the perspective for each of the projectors, display parameters corresponding to the appearance of the media on the common display;

displaying, on the common display, the frame according to the display parameters; and

recomputing, based on the appearance of the media on the common display, each of the display parameters.

34. The method of claim 33 wherein the recomputing results in a desired view of the image.
35. The method of claim 33 further comprising automatically recomputing and coordinating to maintain a desired view of the image.
36. The method of claim 33 wherein recomputing further comprises computing distance and scaling.
37. The method of claim 33 wherein recomputing further comprises adjusting shading such that a consistent brightness of the displayed image is achieved
38. The method of claim 33 further comprising:
detecting the presence of an interfering object between at least one of the projectors and the common display, the interfering object appearing as an obscured portion on the common display; and

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recomputing the brightness from each of the projectors such that the display intensity at the obscured portion remains consistent.

39. The method of claim 33 wherein recomputing the display parameters comprises computing based on the perspective from each of the locations.
- 5 40. The method of claim 33 wherein recomputing further comprises receiving a feedback image and recomputing display parameters based on the feedback image.
41. The method of claim 33 wherein recomputing further comprises recomputing in response to operator input.
- 10 42. The method of claim 33 wherein recomputing comprises recomputing among eight degrees of freedom.
43. A computer program product having computer program code for transmitting presentation data from a media source to a media presenter comprising:
 - computer program code for establishing a wireless link between the
 - 15 media source and the media presenter, the media source having a media sequence comprising frames;
 - computer program code for transmitting at least one frame from the media source to the media presenter;
 - computer program code for rendering a displayed image by the media
 - 20 presenter on a common medium based on the transmitted frame; and
 - computer program code for selectively transmitting at least a portion of a subsequent frame in the media sequence from the media source to the media presenter when a measurable difference in images from one frame to another frame is detected in the media sequence.

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44. A computer data signal including program code for transmitting presentation data from a media source to a media presenter comprising:
- 5 program code for establishing a wireless link between the media source and the media presenter, the media source having a media sequence comprising frames;
- program code for transmitting at least one frame from the media source to the media presenter;
- program code for rendering a displayed image by the media presenter on a common medium based on the transmitted frame; and
- 10 program code for selectively transmitting at least a portion of a subsequent frame in the media sequence from the media source to the media presenter when a measurable difference in images from one frame to another frame is detected in the media sequence.
45. A system for integrating and coordinating a plurality of media presentation displays comprising:
- 15 means for establishing a wireless link between the media source and the media presenter, the media source having a media sequence comprising frames;
- means for transmitting at least one frame from the media source to the media presenter;
- 20 means for rendering a displayed image by the media presenter on a common medium based on the transmitted frame; and
- means for selectively transmitting at least a portion of a subsequent frame in the media sequence from the media source to the media presenter when a measurable difference in images from one frame to another frame is detected
- 25 in the media sequence.

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